Author Index

Aeyels, D. 1044
Ahlen, A. 177
Altintas, Y. 899
Alvarez, Jm. 567
Alvarez, Jq. 567
Anderson, B. D. O. 233, 487
Ando, Y. 585
Astrom, K. J. 641, 947
Axelby, G. S. 1

Banaszuk, A. 421
Barmish, B. R. 283
Barraud, A. Y. 803
Bartlett, A. C. 269
Bastin, G. 85
Beghelli, S. 171
Belanger, P. R. 629
Belforte, G. 887
Bersini, U. 1025
Bititci, U. S. 445
Bittanti, S. 915, 929
Bodson, M. 757
Bolzern, P. 929
Bona, B. 887
Buckley, J. J. 513

Cacciabue, P. C. 1025
Campi, M. 929
Candy, J. V. 157
Canudas de Wit, C. 599
Cao, R. 797
Carrie, A. 443
Carrillo, J. 599
Castro, R. 567
Cerone, V. 887
Chen, B.-S. 1035
Christensen, G. S. 389, 397
Chung, S.-T. 997
Cluett, W. R. 691
Colaneri, P. 377

Damborg, M. J. 521
Dastych, J. 823
Davison, E. J. 251
de Mathelin, M. 757
de Souza, C. E. 97
Demetriu, S. 721
Dias, R. J. 417
Diduch, C. P. 425
Doebelin, E. O. 822
Doraiswami, R. 425
Dubois, D. 75
Dumont, G. A. 781

Elbanna, R. M. 789
Eslami, M. 623
Eykhoff, P. 3

Farison, J. B. 619, 933
Fasol, K. H. 475

Favier, G. 75
Feng, C.-B. 769
Ferretti, G. 557
Fiagbedzi, Y. A. 321
Frank, P. M. 459
Franklin, G. 1043

Gajic, Z. 919
Gendron, S. 629
Gentil, S. 803
Gertler, J. 381
Gevers, M. 85
Giannakis, G. B. 187
Goberdhansingh, E. 691
Gombani, A. 103
Goodwin, G. C. 97
Grimble, M. J. 949
Grizzle, J. W. 997
Gu, D.-S. 437
Guidorzi, R. P. 171
Gunnarsson, S. 7
Gutman, P.-O. 709

Haber, R. 651
Haest, M. 85
Halevi, Y. 637
Hippe, P. 405
Hirsch-Kreinsen, H. 429
Hogg, B. W. 135
Hollot, C. V. 269
Hrovat, D. 845
Huang, J. 963
Huijberts, H. J. C. 973
Hunt, K. J. 642

Iftar, A. 593
Ikeda, M. 499
Isidori, A. 939
Iwai, S. 1009

Jennings, L. S. 371
Johannsen, G. 811

Kabaila, P. 633
Katai, O. 1009
Khargonekar, P. P. 113
Kociecki, M. 421
Kolar, P. 444
Kolla, S. R. 619, 933
Kopacek, P. 937
Krause, J. M. 113
Kulhavy, R. 183, 545
Kuo, T.-S. 303

Lefebvre, M. 435
Lennartson, B. 573
Lewis, F. L. 411
Lin, W.-S. 263
Liu, Y. 233, 487
Ljung, L. 7

Looze, D. P. 269
Luck, R. 903
Ly, U.-L. 233

Ma, C. C. H. 899
Maffezzoni, C. 557
Makila, P. M. 333, 617, 985
Mancini, G. 1025
Mao, C. J. 263
Martin, T. 611
McAvoy, T. 797
Medanic, J. V. 909
Mesquita, A. 417
Mikles, J. 293
Mills, J. K. 861
Momot, M. E. 353
Morari, M. 361
Moray, N. 811
Morrell, D. J. G. 135
Murata, S. 585

Najim, M. 938
Neumann, L. 709
Nijmeijer, H. 821, 973
Novovicova, J. 607

Osiadacz, A. J. 441
Ozguner, U. 593

Pageau, G. L. 781
Pagola, F. L. 215
Palmor, Z. J. 637
Parks, P. C. 3
Pavon, M. 103
Paz, R. A. 909
Pearson, A. E. 321
Perez-Arriaga, I. J. 215
Pohl, G. M. 475
Popescu, Th. D. 721
Postlethwaite, I. 437
Pronzato, L. 195
Przytuski, K. M. 421

Radenkovic, M. S. 533
Rao, G. P. 23
Ray, A. 903
Rivera, D. E. 361
Roesler, M. D. 353
Rossi, V. 557
Rugh, W. J. 963
Runggaldier, W. J. 401

Sagara, S. 63
Salgado, M. E. 97
Sancha, J. L. 215
Saridis, G. N. 833
Sawaragi, T. 1009
Scattolini, R. 377, 915
Schiavoni, N. 377
Schierwagen, A. K. 739

Schoukens, J. 579
Schultz-Wild, R. 429
Schweppe, F. C. 215
Shen, X.-M. 919
Shoureshi, R. 353
Siler, W. 513
Siljak, D. D. 499
Singer, D. 381
Soderstrom, T. 125
Soliman, S. A. 389, 397
Soverini, U. 171
Stankovic, S. S. 533
Stassen, H. G. 811
Stoica, P. 125
Sullivan, E. J. 157
Sundareshan, M. K. 789
Suzuki, M. 585
Szafnicki, K. 803
Sznaier, M. 521

Tamminen, J. 347
Tempo, R. 283
Teo, K. L. 371
Toivonen, H. T. 347
Tsai, M. C. 437
Tugnait, J. K. 311, 51
Tulleken, H. J. A. F. 37
Tzafestas, S. G. 875

Ulich, E. 611
Unbehauen, H. 23, 651

Valasek, P. 441
van Amerongen, J. 679
van der Klugt, P. G. M. 679
van Nauta Lemke, H. R. 679
Vaz, A. F. 251
Verghese, G. C. 215
Vingerhoeds, R. A. 185
Visentin, C. 401

Wahlberg, B. 167
Walter, E. 195
Wang, F.-Y. 833
Wang, S.-D. 303
Wang, W.-J. 1035
Warnecke, H. J. 611
Watanabe, K. 875
Weinfeld, R. 925
Wertz, V. 85
West, J. C. 824
Wittenmark, B. 699

Yaniv, O. 709
Ying, H. 513

Zervos, C. C. 781
Zhao, Z.-Y. 63
Zheng, W.-X. 769
Zhong, Y. 629

Key Word Index

A priori knowledge 699
Active suspensions 845
Actuator failures 459
Actuators 861
Adaptive control 75, 533, 679, 699, 709, 757, 781, 797, 899
Adaptive systems 7, 113, 401, 929
Algebraic system theory 293
Analytical redundancy 381
Approximation algorithms 401
Approximation theory 233, 333, 545, 985
ARMA models 721
Array processing 157
Artificial intelligence 85, 803
Automatic control 353, 405
Automatic gain control 679

Bayes methods 401
Bayes statistics 545
Bounded errors 887
Bounding ellipsoids 303
Brain models 739

Canonical form 585
Classification 1009
Closed loop systems 709
Cognitive systems 1025
Computational delays 619
Computer applications 85
Computer control 521
Computer testing 797
Computer-integrated manufacturing 611
Consistency analysis 63
Constrained systems 521
Continuous systems 23, 397
Continuous time systems 579
Control applications 215, 347, 353
Control system analysis 269
Control system design 585, 909, 963
Control systems 269
Control systems synthesis 709, 973
Control theory 425, 617, 963, 997
Controllability 425
Controller reduction 487
Controllers 233
Convergence 757
Convergence analysis 113, 533, 929
Coordination 833
Coordination structure 833
Correlation analysis 769
Correlation methods 125
Covariance function 125

Data acquisition 135
Dead beat control 475
Dead time compensators 637
Decentralized control 263, 499, 593, 789, 875, 1035
Decision theory 1009
Decomposition 593
Deconvolution 177
Decoupling 567, 585
Delay systems 333
Delayed control systems 903
Delays 425, 637
Design of jobs 429
Deterministic analysis 739, 929
Diagnosis 381
Diagonal dominance 789, 861
Differential geometry 545
Digital control 475, 915, 997
Digital control systems 557
Digital filters 579
Discrete systems 171, 619, 933
Discrete time systems 401, 421, 579, 607, 623, 915, 925
Distillation columns 567
Distributed parameter systems 739
Disturbance rejection 567, 607, 909
Division of labour 429
Doubly coprime fractional representations 405
Dynamic programming 521
Dynamic stability 215
Dynamic systems 389

Earthquake ground motion 721
Economic systems 933
Eigenvalues 215
Entropy 833
Estimation 113, 567
Estimation theory 607
Experiment design 195
Expert systems 459, 803, 1009

Failure detection 381, 459, 875
Fault diagnosis 459
Feed forward control 567
Feedback control 353, 521, 567, 709
Field tests 475
Flexible manufacturing 429, 611
Forecasting theory 633
Frequency domain 113, 405, 617, 633, 757
Function approximation 371
Functional analysis 781
Functional differential equations 321
Fuzzy control 513
Fuzzy logic 1025
Fuzzy set theory 1009

Gain and phase margins 499
Geometric theory 411
Geophysics 721

H^∞ approach 437
H^∞ optimization 617
Hankel-norm approximation 103
Heuristic programming 85
Hierarchical decision making 875
Hierarchical systems 1025
Higher-order statistics 51, 311
Human factors 429, 1009, 1025
Human performance 811
Hydraulic turbines 475, 557

Identifiability 177, 195, 739, 757
Identification 37, 63, 113, 157, 177, 195, 607, 629, 633, 651, 739, 757, 781, 803, 887, 925, 929
Identification algorithms 769
Identification techniques 23
Implementation process 429
Implicit systems 421
Industrial control 347
Infinite dimensional systems 333, 985
Input estimation 177

Instrumental variable method 63
Integral transforms 435
Integrated control system 903
Intelligent control 833
Intelligent machines 833
Interconnected systems 251, 263
Invariance 411
Isolability 381
Iterative methods 371

Kalman filters 875, 919

Laguerre functions 333, 985
Laplace transforms 333, 985
Large scale systems 593, 919, 1035
Large systems 789
Least squares estimation 63, 599, 607, 633
Linear algebra 417
Linear differential equations 63
Linear optimal control 499, 617
Linear optimal regulator 233, 487
Linear programming 887
Linear regulators 619
Linear systems 97, 171, 233, 303, 333, 405, 417, 421, 607, 709, 915, 925, 985
Linearization techniques 963, 973
Loop transfer recovery 487
Lyapunov equations 411
Lyapunov methods 933

M-matrix 1035
Machining 899
Man-machine systems 429, 611, 811, 1009
Management systems 429
Manufacturing processes 611
Membership set 887
Mental load 811
Minimum variance control 633, 691
Model following 949
Model parameterization 699
Model reduction 103, 215, 233, 251, 333, 361, 475, 487, 985
Model validation 125
Model-based approach 157
Modelling 135, 195, 475, 557, 803
Models 651
Multirate control systems 377
Multivariable control systems 437
Multivariable predictors 75
Multivariable systems 171, 293, 405, 417, 757

Near optimal control 263
Neurophysiology 739
Noncausal autoregressive models 51, 311
Nonlinear control systems 353, 513, 567, 679, 963, 973
Nonlinear filtering 401
Nonlinear process 651
Nonlinear programming 371
Nonlinear systems 353, 499, 899, 997
Nonparametric and parametric models 23
Nonstationarity analysis 721
Numerical methods 371

Observability 421
Observer controller compensator 1035
Observer design 903
Observers 321, 411, 459, 789, 997
On-line operation 521
Optimal control 361, 389, 435, 573, 593, 679, 845, 949
Optimal experiment design 37
Optimal filtering 389, 397
Optimal predictors 75
Optimal state estimation 397
Optimization 371, 437, 521
Order estimation 157
Orthonormal functions 781
Output feedback 321
Overlapping decomposition 593

Parameter estimation 37, 51, 63, 97, 125, 135, 167, 171, 195, 293, 401, 533, 545, 599, 607, 721, 739, 757, 769, 803, 875, 887, 925
Parameter optimization 909
Parity equations 381
Partial differential equations 435, 739
Participation 611
Pattern recognition 797
Periodic systems 377
Perturbation techniques 919
Perturbations 283
Petri net language 833
Petri net transducer 833
pH control 781
PI-control 475
PID control 513, 797
Pole placement 377, 573
Polynomials 405, 949
Power generation 135
Power station control 475, 557
Power system control 215
Prediction 75, 949
Prediction error methods 125
Predictive control 75, 691, 781, 915
Process control 347, 557, 691, 781, 915
Production control 611
Psychological methods 1025
Pulp and paper 629
Pulp industry 347, 781

Random process 103, 435
Range estimation 157
Rapid sampling 167
Recursive algorithms 7, 545, 887
Recursive estimation 103, 401, 925
Recursive least squares 929
Reduced-order observers 405
Redundancy 459
Regulator 585
Relay control 691
Reliability 459
Robotics 833
Robots 861
Robust control 269, 303, 347, 353 475, 709
Robust stability 1035
Robust stability analysis 623
Robustness 113, 269, 283, 303, 401, 437, 459, 499, 607, 637, 781, 903, 933
Root locus 283

Sampled data systems 167, 377, 425, 545, 573, 637, 997
Saturation control 899
Self-adapting systems 1009
Self-tuning predictors 75
Self-tuning regulators 293, 533, 781
Sensitivity analysis 215, 623
Sensor failures 459
Separation principle 321
Servomechanisms 963
Ship control 679
Signal processing 721, 739
Simulation 63, 475, 721
Singular control 845
Singular perturbations 215, 251, 585
Singular systems 411, 417
Skill 611
Skilled production work 429
Smoothing 103, 371
Social effects of automation 611
Socio-technical systems design 611
Spectral decomposition 177
Spectral detectability 321
Spectral stabilizability 321
Stability 215, 353, 521, 567, 861, 933
Stability criteria 269
Stability robustness 619
Stabilizers 215, 377, 679
State estimation 405, 573, 789
State feedback 303
State transformation 933
Statistical tests 125
Statistics 167, 607
Stochastic approximation 533
Stochastic control 347, 435, 573, 919
Stochastic systems 167, 435, 533, 607, 925
Structure identification 651
Suboptimal control 521
Supervisory control 811
Synchronous composition 833

Synthesis method 437
System theory 421
System identification 7, 23, 51, 85, 135, 167, 171, 311, 599, 769
System models 23
System order determination 125, 311
System order reduction 97, 233, 919
System theory 333, 417, 985
Systems failure and recovery 459
Systems identification 125

Time delay estimation 769
Time lag systems 691, 769
Time series analysis 51, 125, 171, 311, 721
Time-varying systems 7, 629
Tracking systems 567, 963
Trees 521

Uncertain systems 709
Unmodelled 263

Value set 283
Vehicles 845
Vibration control 845

Wave number estimation 157
Weighted least absolute value 389, 397
Work organization 429, 611

Reproduced with the permission of Pergamon Press Inc., by University Microfilms Inc. Duplication or resale without permission is prohibited.